

**SCHOOL HEALTH PROGRAMME AND THE REDUCTION OF
COMMUNICABLE DISEASE AMONG SECONDARY SCHOOL STUDENTS IN
AKPABUYO LOCAL GOVERNMENT AREA, CROSS RIVER STATE, NIGERIA**

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Abstract

The purpose of this study was to investigate the relationship between school health programme and reducing communicable diseases among secondary school students in Akpabuyo Local Government Area of Cross River State, Nigeria. To achieve the purpose of the study, two null hypotheses were formulated and tested at 0.05 level of significance. Literature was reviewed based on the variable of the study. The study adopted survey design. The population of the study consisted of all secondary school students in the study area giving a total of seven thousand, one hundred and six (7,106). Systematic sampling technique was adopted in selecting the two hundred and thirty-eight (238) respondents used for the study. The instrument used for data collection was a structured and validated questionnaire. Pearson Product Moment Correlation Coefficient was used for data analysis. The result obtained from the study revealed that school health education and school health services relate significantly to reducing communicable diseases among secondary school students in the study area. Based on these findings, it was recommended that school principals should ensure that school health services are expanded in public secondary schools in other to continually contribute to reducing the incidence of communicable diseases among students.

Keywords: School Health Programme, Reduction of Communicable Disease, School Health Education and School Health Services



Introduction

Communicable diseases, also known as transmissible or infectious diseases, spread from one person to another or from surfaces to individuals. They result from various pathogens, including viruses, bacteria, fungi, and protozoa. Internationally, infectious diseases include many types, among which tuberculosis (TB), influenza, and mumps are relatively common (Wang, Han, Fang, Xu, Lin, Xia, Yu, He, Jiang, Tao, 2018). Various forms of communicable diseases occur in schools. Secondary school students form a special group that features high population density and close interpersonal contact, easily causing outbreaks of infectious diseases in the absence of timely control. As a gathering place for young people, schools display characteristics of a largely susceptible population, frequent contact, and gathering age and are a place, where outbreaks of infectious diseases, especially respiratory diseases, may occur.

School health programs play a crucial role in reduction of communicable diseases among secondary school students. According Chukwuocha, Ashiegbu, Dozie, Aguwa, Maduka and Ntaji (2022) school-based health programme is a very important medium for addressing the health needs of students. The World Health Organization stipulates that school health programmes should address HIV/AIDS and sexually transmitted diseases, violence and injury, unintended pregnancy and poor reproductive health, helminth infection, poor nutrition and food safety, poor-sanitation and water control, lack of immunization, poor oral health, malaria, respiratory infections, psychological problems, alcohol, tobacco and illicit drug abuse (WHO, 2023).

Despite the effort of government and curriculum planners to sustain the presence of health programmes through teaching and provision of health services in schools, it is however sad that health programmes such as health education and health services have shown that infectious diseases are still prevalent in secondary schools in Nigerian and Cross River State in particular. Thus, it has become a matter of serious concerns which has arouse many stakeholders in education and related fields, including the researcher to find out how this problem may be halted.

Kupony and Amoran (2016) stated that availability of school health service improves the general health of the students, improves the teachers' concentration in teaching and that of students in learning and culminates to producing higher grades. According to Moroorkola (2022), several factors militate against the effective implementation of school health programme which include: low level of health knowledge among trainees and practicing teachers, high level of health misconceptions among students and teachers, high level of indifference and negative attitude towards school health programme among teaching and non-teaching staff, inadequate resources, presence of incompetent teachers, minimal support from non-governmental agencies and other community members as well as lack of legislation to protect school children from health risk in schools.

World Health Organization (2021) reported that an effective school health programme can be one of the most effective investments as a nation can make to Simultaneously improve education and health. School health programme is a strategic means to prevent important health risks among youth and to engage the educational sector in effort to change the educational, social economic and political conditions. This motivated the researcher to investigate the impact of health programme in reduction of communicable disease among secondary school students in Akpabuyo Local Government Area of Cross River State.

Purpose of the study

The main purpose of this study was to determine the relationship between school health programme and the reduction of communicable disease among secondary school students in Akpabuyo Local Government Area of Cross River State. Specifically, the study sought to:

1. Examine the relationship between teaching of health education and reduction of communicable disease among secondary school students in Akpabuyo.
2. Determine the relationship between the provision of health services and the reduction of communicable disease among secondary school students in Akpabuyo.

Statement of hypotheses

1. There is no significant relationship between health education in the reduction of communicable disease among secondary school students.
2. Provision of Health services do not significantly relate with the reduction of communicable diseases among secondary school students.

Literature review

Health education and reduction of communicable diseases

Health education plays a crucial role in promoting well-being and preventing illness. Schools are essential for young people to acquire knowledge, socioemotional skills including self-regulation and resilience, and critical thinking skills that provide the foundation for a healthy future. Access to education and safe and supportive school environments have been linked to better health outcomes. In turn, good health is linked to reduced drop-out rates and greater educational attainment, educational performance, employment and productivity (WHO, 2022).

According to Wang, Han, Fang, Xu, Lin, Xia, Yu, He, Jiang and Tao (2018), primary, junior, and senior high school students form a special group that features high personnel density and close interpersonal contact, easily causing outbreaks of infectious diseases in the absence of timely control. As a gathering place for young people, schools display characteristics of a largely susceptible population, frequent contact, and gathering age, making it a place where outbreaks of infectious diseases, especially respiratory diseases, may occur (Feng, Luo, Li, Wang, Zhang & Liu, 2015). Coupled with rapid socioeconomic development and frequent population flows, infectious diseases more possibly occur and spread in schools. Epidemics or outbreaks of infectious diseases in schools not only affect teaching order, resulting in an adverse social effect, but also negatively affect physical and mental health of young people (Wieland, Weis, Olney, Patten, Lindeke & Gates, 2021).

Studies showed that more than 70% of public health emergencies in Nigeria occur in schools, with most emergencies being infectious disease events (Hosain, Saha, Begum, Rahman & Akhter, 2023). Therefore, strengthening the attention of students and schools presents significance in preventing and treating infectious diseases. Health Education is often indicated to accommodate an individual approach by substituting the three domains of health “healthcare, disease prevention, and health promotion” with “being ill, being at risk, and staying healthy” (Sørensen, Van Den Broucke, Fullam, Agbor et. al 2026; Doyle & Pelikan, 2022). Health education bears significance in improving prevention and control of infectious diseases, whereas health knowledge and behaviour are important components of health literacy.

Given the current high incidence of infectious diseases among primary, junior, and senior high school students, improving health literacy of students on infectious diseases serves as an important channel in controlling epidemics and outbreaks of infectious diseases in schools. Health education can improve student knowledge on infectious diseases and promote the development of appropriate behaviours toward infectious disease prevention and control. Health promotion is based on health education, which is founded on health knowledge. Health education effectively slows spread of infectious diseases, and conducting school health education programs not only provides students with proper knowledge and behaviour toward infectious diseases but also benefits the comprehensive development of schools (Jedrzejewska, Kalinowski, Stachowicz, Wójcik & Kaczmarczyk, 2015). Therefore, health education must be strengthened to improve health literacy of students.

Numerous scholars studied the effects of health education in improvement of knowledge on infectious diseases and changes in preventive behaviours among school students. Li, Wang, Chen, Zhang and Zhao (2015) studied influenza awareness among medical college students before and after a health education program and observed that health education is the main approach for medical college students to accept scientific and specific knowledge on influenza prevention. Again, Mohammadi, Tavafian, Ghofranipoor and Amin-Shokravi (2022), explained and affirmed effects of educational program on knowledge attitudes and preventive behaviours toward infectious diseases among students and adults.

Accordingly, Luo, Qu, Li, Zhang, Wang and Liu (2023), studied changes in awareness in measles, rubella, and mumps among middle school students in Tianjin before and after health education intervention and confirmed that health education can improve cognitive level and prevention awareness of infectious diseases, such as mumps. Yue (2015) discussed impacts of face-to-face health education on knowledge of primary school students on mumps and observed that health education can significantly improve mumps awareness of primary school students. Empirical studies also showed that health education can change unhealthy attitudes and behaviours, effectively curbing infectious diseases and epidemics (Mohammadi et al, 2022, Kim, Kim, Nam, Jee, Lee & Park, 2016). Previous studies mainly stated the positive effect of health education on prevention and control of infectious diseases among students but rarely explored correct levels of knowledge and behaviour of students with different social backgrounds toward infectious diseases; only a small number of studies reported factors that affect student knowledge and behaviour toward infectious diseases.

Provision of health services and reduction of communicable diseases

Schools are the only institution regularly reaching the majority of school-age children and adolescents across the globe. Although at least 102 countries have school health services, there is no rigorous, evidence-based guidance on which school health services are effective and should be implemented in schools (Brown & Bolen, 2018). In the view of Baltag and Pachyna (2015), school environment offers a unique platform for health care delivery. In 2015, the global means for the primary and secondary net school enrolment rates were 90% and 65%, respectively, thus the potential reach of school health services is wide. A recent review found that school-based or school-linked health services already exist in at least 102 countries (Ballard & Montgomery, 2017). The 2017 Global Accelerated Action for the Health of Adolescents implementation guidance calls for the prioritization of school health programs as an important step towards universal health coverage and urges that every school should be a health promoting school (WHO, 2017; Meremikwu et. al 2022).

According to Leroy, Wallin, Lee, Lewin and Chung (2017), school health services play a key role in managing the daily needs of students with infectious diseases. Although these health conditions can vary widely in concept and definition, infectious disease conditions are typically accepted as having potential for functional limitations, including dependency on medication, assistive devices, or routine medical care (Lee, Mokink, Grootenhuis, Heymans & Offringa, 2017; Patrick et. al, 2025; Patrick et. al, 2025; Patrick et. al, 2026). The school nurse or a designated provider is often responsible for coordinating and conducting health assessments, as well as planning and implementing individualized health-care plans for safe and effective management of infectious diseases, often for those who may have limited access to health care. These health services are designed to help with access or referrals by linking school staff, students, families, community, and health-care providers together to promote the healthcare of students in a healthy and safe school environment (Lee, et al, 2017; (Antai et. al, 2025; Effiong. & Agbade, 2018; Agbade et. al 2024).

The school-based health center is another model that represents an important interdisciplinary approach to providing comprehensive physical and mental health care for students. School-based health center typically delivers primary care services and may include reproductive, dental, and acute care services for students and may also coordinate with external community providers (Brown & Bolen, 2018). Lack of effective/inefficient health service in schools has its consequences, including cognitive performance and educational achievements in children. It will also lead to significant increase in school enrolment, school performance, and attendance; and influence the hygiene practices of parents and siblings via school students acting as agents of change (Allensworth & Kolbe, 2019; Akeh et. al 2026; Inyang et. al 2022; Igyu et. al, Obi et. al 2020; Adie et. al, 2026). The integration of

preventive health services in the education system helps to detect health problems in school children and furthers early interventions intended to improve health and, therefore, cognitive outcomes (Allensworth & Bradley, 2019; Valentijn, Schepman, Opheij and Bruijnzeels 2023). Health services available in schools (School Health Services) include prevention, early detection and intervention in the area of school children's physical, social and - increasingly - mental health (Allensworth & Bradley, 2019; Agbade et. al 2018; Effiong & Agbade2016). Research shows that equal access to SHS and SHS quality need to be improved for all groups of children. Furthermore, SHS should be tailored to health priorities such as overweight and mental health (Coker, Windon, Moreno, Schuster & Chung, 2023).

Methodology

The research design adopted for this study was survey design. The design was considered most appropriate because, it allows the researcher to efficiently gather standardize information from large group, giving a broad, reliable view of opinions and needs to assess and improve its work. The population of this study consisted of all secondary school students in Akpabuyo Local Government Area of Cross River State giving a total of seven thousand, one hundred and six (7,106). Systematic random sampling technique was adopted in selecting the sample of two hundred and thirty-eight (238) students, randomly selected from four secondary schools in the study area. A structured questionnaire titled: School Health Programme and Reduction of Communicable Diseases Questionnaire (SHPRCDQ). The questionnaire consisted of two sections. Section A contained respondents' personal data. Section B was developed using four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). It contained twenty (20) items measuring the variables in the study. Items 1-5 measured health education, items 6-10, while items 11-20 measured reduction of communicable diseases. Pearson Product Moment Correlation statistics was the statistical tool used for data analysis.

Result

Hypothesis one: There is no significant relationship between health education and reduction of communicable diseases among secondary school students.

Table 1: Pearson Product Moment Correlation analysis of the relationship between school health education and reduction of communicable diseases among secondary schoolstudents in Akpabuyo Local Government Area, Cross River State (N = 238)

Variables	$\sum x$	$\sum x^2$	$\sum xy$	Cal. r-value	P-value
School health education	3775	428	5781	0.376*	0.000
Reduction of communicable diseases	6289	6836			

Significant at 0.05; df = 236; calculated r-value 0.376

The result of data analysis presented in Table 1 showed that the calculated r-value of 0.376 was higher than the p-value of 0.000 at 0.05 level of significance with 236 degree of freedom. This implied that the null hypothesis was rejected. Therefore, there is a significant relationship between school health education and reduction of communicable diseases among students in public secondary schools in Akpabuyo Local Government Area of Cross River State.

Hypothesis two: Health services do not significantly relate with reduction of communicable disease among secondary school students.

Table 2: Pearson Product Moment correlation analysis of the relationship between school health services and reduction of communicable diseases among secondary school students in Akpabuyo Local Government Area, Cross River State (N = 238)

Variables	$\sum x$	$\sum x^2$	$\sum xy$	Cal. r-value	P-value
Health service	3452	958	5316	0.347*	0.000
Reduction of communicable diseases	6289	6836			

Significant at 0.05; df = 236; calculated r-value 0.347

The result of data analysis presented in Table 2 showed that the calculated r-value of 0.347 was higher than the p-value of 0.000 at 0.05 level of significance with 236 degree of freedom. This implied that the null hypothesis was rejected. Therefore, there is a significant relationship between school health services and reduction of communicable diseases among students in public secondary schools in Akpabuyo Local Government Area of Cross River State.

Discussion of findings

Health education and reduction of communicable diseases among secondary school students

The finding obtained from analysis of data and testing of hypothesis one in this study revealed that the null hypothesis was rejected. The implication is that there was a significant relationship between school health education in the reduction of communicable diseases among students in public secondary schools in Akpabuyo Local Government Area of Cross River State. This finding could be associated with the efforts made to improve school health education through posters, fliers, documentaries, seminars among others. These efforts have yielded quite positive health outcomes that have impacted positively on the control of communicable diseases among students within the study area because there has been a decrease in the incidence of communicable diseases. This highlights the importance of health education in reduction of the spread of communicable diseases among secondary school students in the study area.

The finding of this study agrees with that of Luo et. al. (2023) who reported that health education can improve cognitive level and prevention awareness of infectious diseases, such as mumps. Yue (2015) discussed impacts of face-to-face health education on knowledge of primary school students on mumps. The found that health education can significantly improve mumps awareness of primary school students. Conversely, health education can change unhealthy attitudes and behaviours, effectively curbing infectious diseases and epidemics (Mohammadi et al, 2022; Kim et al, 2016).

The finding also supported that of WHO (2022), who found that health education is crucial for promoting well-being and preventing illness. Schools equip students with knowledge, socioemotional skills, and critical thinking, linking to better health, reduced drop-out rates, and improved education and productivity.

Provision of school health services in the reduction of communicable diseases among students in public secondary schools in Akpabuyo Local Government Area of Cross River State

The finding obtained from analysis of data and testing of hypothesis two in this study revealed that the null hypothesis was rejected. The implication is that there was a significant relationship between provision of school health services in the reduction of communicable diseases among students in public secondary schools in Akpabuyo Local Government Area of Cross River State. This finding could be traced to the fact that most schools in the study area are beginning to provide more improved health services for staff and students in recent years. This has helped students to stay healthy and concentrate on their academic endeavours (Agbade et. al 2022; Opara et. al 2020; Agbade et. al 2018; Usua et. al 2023). The improvement in health services in school through the provision of health counseling services, first aid services, sick bay among others has contributed positively to the prevention of the spread of communicable diseases among students in public secondary schools in the study area.

The finding is in agreement with that of Leroy et al (2017) who asserted school health services play a key role in managing students with infectious diseases. Lee et al (2017) also noted that school nurses coordinate health assessments and individualized care plans, linking students, families, and healthcare providers to promote safe and healthy environments. School-based health centers provide comprehensive physical and mental care, including primary, reproductive, dental, and acute care services.

The finding also supported that of Valentijn et al. (2023) who noted lack of effective school health services impacts cognitive performance and educational achievements. Allensworth and Kolbe (2019) highlighted links to improved enrolment, attendance, and hygiene practices. Integrating health services in schools detects problems early, improving health and cognitive outcomes (Allensworth & Bradley, 2019; Valentijn et al., 2023).

Conclusion

The essence of this study was to examine and present findings on school health programmes in the reduction of communicable diseases among secondary school students in Akpabuyo Local Government Area of Cross River State. The findings from analysis of data and testing of hypotheses revealed that school health education and school health services relate significantly with reduction of communicable diseases among secondary school students in the study area. However, effective school health programmes (health education and services) might lead to reduced communicable diseases among secondary school students in Akpabuyo, Cross River State.

Recommendations

Based in the finding obtained from analysis of data and testing of hypothesis in the study, it was recommended that:

1. School health personnel in collaboration with the Ministry of Health should continue to provide students with relevant school health education that would further contribute to reduction of communicable diseases.
2. School principals should ensure that school health services are expanded in public secondary schools in other to continually contribute to reducing the incidence of communicable diseases among students.

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